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Identification of the Factors of Utilization Pattern of Post Natal Services by the Mothers and Their Satisfaction Level in a Selected Rural Community, West Bengal

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Abstract

A descriptive survey to identify factors of utilization pattern of postnatal services by the mothers and their satisfaction level among 100 mothers having baby of 6 weeks to 6 months of age. The conceptual framework was based on Anderson Model of Health service utilization. Non –probability purposive sampling technique was used. Data were collected through valid and reliable tools which included a semi structure interview schedule, record analysis proforma and a rating scale. The study revealed that majority (86%) of the mothers were not aware about the post-natal services and only (34%) of the participants utilized three postnatal visits. It was also found out that majority of the mothers were satisfied related to physical facilities of the post-natal service except for waiting time where majority of the mothers were partially satisfied. (52%). Regarding health worker's behavior majority was satisfied, except for maintaining privacy for examination where majority of them were partially satisfied, (65%). Majority of the mothers were satisfied with the quality of post-natal care, except for conveying the findings where majority were partially satisfied (55%). The study further revealed that there is significant association between mother's education and utilization pattern of post-natal services at 0.05 level of significance as evidenced by x^2= 5.8The study also revealed that there is significant association between husband's education (x^2=5.1), and per- capita income(x^2=4.5) with immunization on schedule date.

Keywords: Postnatal service; Utilization pattern; Factors; Satisfaction level; Postnatal mothers

Introduction

Post-partum period is recognized as a critical time for both mother and new-borns. Postpartum period is a crucial phase for the women as there are physiological changes along with psychological adaptation for changing role in the family. Many post-partum complications occur during this period. Among these the important obstetric morbidities are post-partum hemorrhage, pulmonary embolism and puerperal sepsis. The common surgical complications are wounds breakdown, breast abscess and urinary fecal incontinence. Medical conditions such as anaemia, headache, backache, sexual problems may also be present. Worldwide everyday at least 1600 women die from complications of pregnancy and child birth, the majority of which takes place in the developing countries [1]. Most deaths of mothers and new-born occur soon after delivery, over 60 percent of maternal death occur within first 48hrs after child birth,(WHO 2005) [2]. All neonatal deaths in 1st month of life are due to non HIV (asphyxia, sepsis, pre maturity), highlighting the need to address the quality of basic maternal and new-born care. Three quarter of new born death occurs, in the first week and of those, two thirds occurs in the first 24 hrs. Inter pregnancy interval of less than 18 months and more than 59 months are significantly associated with increased risk of adverse perinatal outcomes. Throughout the world, many women use the return of their menstrual period as a signal to begin contraception yet the return of menses may indicate that the fertility returned several weeks before, thus leaving up to 10percent of women at risk of becoming pregnant before their menses resume [3]. Post-partum care is the most neglected aspect of maternity care and more research is needed on issues related to postnatal maternal health. Early post-partum care is essential to diagnose and treat complications. Only 1 in 6 women receive care during the postpartum period in India. The National Family Health Survey data indicate that only 17percent of the women delivering at home was followed by a check –up within two months of delivery, and a meager five percent within the first 7 days. Even out of this minor range of women, most of them were not provided with the entire range of information and services that should have been provided to a woman during a postpartum visit [4]. WHO estimates that out of the 529,000 maternal deaths globally each year 136, 000, (25 percent) are contributed by India.(6) It is estimated that between 11-17 percent of maternal death occurs during child birth itself and between 50 to 71 percent in the post-partum period and 45 percent of postpartum maternal death occurs during the first 24hrs and more than two thirds during the first week [5]. On an average, skilled birth attendants cover 66 percent of all births worldwide, and some parts of Africa and Asia have much lower coverage rates. In developed countries virtually all women and their infants receive postpartum and post natal care albeit the nature and frequency of this care. In developing countries the need for care and support after birth was, until recently, less recognized. Despite its importance, this period is generally the most neglected. Rates of provision of skilled care are lower after childbirth than during pregnancy or childbirth, even though both the risks for illness and the potential to improve longer-term outcomes are great [6].

One of the major challenges in our country is to reduce the maternal mortality rate. An alarming scenario of pregnancy related complications claim the lives of an estimated 0.5 million women

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worldwide and one women every minute. Besides maternal death increases child's risk of death 3-10 times within the first two years of their life [7].

Current models of postpartum care in developed countries originated in the beginning of the 20th century in response to high maternal and neonatal mortality rates of the time. Research into the current coverage and content of postpartum and postnatal care has been limited. The average range in the number of visits or contacts that women and their infants have with their health- care providers is not well documented. Even in developed countries there has been little evaluation to assess whether the current models of care meet individual women's and babies' physical and emotional health needs, and whether they make the most appropriate use of the skills and time of the relevant health care professionals and of financial resources [8-10].

Mother and child are the most vulnerable group and in India they contribute about 32-40 percent of the total population in India, and therefore it is very vital to improve their health and well-being [11].

West Bengal contributes about 4.7 percent of total maternal death in the country. It was found out through studies that in the year 2005-2006 , the total number of maternal deaths in West Bengal was 4624 and out of them 1808 (39%) were reported, reflecting the under reporting to a great extent [12]. Against this backdrop the Department of Health and Family Welfare, Government of West Bengal in its mission to improve the healthstatus of all the people of West Bengal especially the poorest and those in need, has embarked on several health sector reforms for reducing maternal and child mortality and the burden of communicable, non-communicable diseases, etc. The Health Sector Strategy (HSS) 2004-2013 has been formulated to address these priority health goals, ensuring quality care and improved access [13].

Client satisfaction reflects quality of services. Good client satisfaction studies are not ends in themselves; they are means to improve service to the public. Broadly, the knowledge on the degree of client satisfaction serves two principal purposes: identifying areas of improvement, in the quality of services offered and highlighting the needs for corrective actions [14].

Satisfaction is an important health outcome in today's cost conscious health care arena. Quality improvement in healthcare organization requires effective measurement of patient satisfaction. The differences in satisfaction mirror the realities of care to a substantial extent and such information can provide dependent measures of services of quality. So as the realization develop the magnitude of the maternal and infant mortality and morbidity and post-partum complications, the investigator attention has been shifted to identification of the factors of the utilization pattern of the postnatal services and their satisfaction level regarding the services [15].

Materials and Methods

This descriptive survey was conducted with the following objectives

- To assess the utilization pattern of postnatal services availed by the mothers in a selected rural area.

- To identify the factors related to the utilization pattern of the service.

- To assess the satisfaction level of the mothers regarding the availed services

- To identify the association of the utilization pattern of services with selected Variables.

Settings

The selection of an appropriate setting is important because the setting can influence the way people behave, feel and how they respond.

Settings of the study - Chaduria 1, Madanpure GP and Rautari sub centre under Chakdaha B.P.H.C, Nadia, West Bengal.

Final study - Chaprah-1 & Doyerbazar Subcentres under Chaprah B.P.H.C, Nadia , West Bengal.

Samples

In the present study 100 mothers having babies of 6 weeks to 6 months of age during the study period were chosen as samples.

Inclusion criteria

- Mothers having babies 6weeks to 6 months of age.

- Mothers who can understand and speak Bengali.

- Mothers who were willing to participate.

Exclusion criteria

- Mother's having complications ⁽mother /baby)

- Mothers who cannot understand or speak Bengali.

Sampling technique

Non probability purposive sampling technique was adopted to select the participants for the study.

Data collection tools and techniques

- A semi structured interview schedule for back ground information and factors of utilization pattern of mothers was developed.

- A structured record analysis proforma for assessing the coverage of immunization of the babies till 6 weeks of age was used.

- A rating scale for assessing the satisfaction level of the mothers regarding the postnatal service was also developed.

Steps of data collection

- After getting the administrative permission from B.M.O.H, Chaprah BPHC, two sub centers were selected.

- On the first day, formal introduction with the health workers (A.N.M) and Anganwadi workers was done.

- Registers were checked to get the sample and their home address and fulfillment of sampling criteria.

- On the subsequent days the investigator met the mothers collectively at Anganwadi center and out reach camp , with the help of link person.

- Purpose of the study was explained to the mothers

- Informed written Consent was taken from the mothers who participated.

- Data was collected according to the objectives using validated and reliable tools.

Results

[Table 1] Data presented in the table, reveals that majority of the mothers(56) were in the age group of 20-30 years. Regarding religion

Table 1: Frequency distribution of mothers according to their personal characteristics. N=100

Sl.No.	Sample characteristics	f
1.	Age	
	- <20 yrs.	41
	- 20-30 yrs.	56
	- 31-35 yrs.	03
2.	Religion	
	- Hindu	27
	- Muslim	73
3.	Mother's education	12
	- Illiterate	71
	- Primary	16
	- Secondary	01
	- Higher Secondary	-
	- Graduate	
4.	Husband's education	
	- Illiterate	16
	- Primary	64
	- Secondary	15
	- Higher secondary	04
	- Graduate	01

Table 2: Frequency distribution of mothers according to the socio- economic characteristics. N=100.

Sl.No.	Sample characteristics	f
1.	Mother's occupation	
	- House wife	100
	- Labour	-
2.	Husband's occupation	
	- Farmer	24
	- Labour	55
	- Business	13
	- Service	07
	- Private Tutor	01
3.	Type of family	
	- Nuclear	42
	- Joint	58
4.	No of family member	
	- 2-4	25
	- >4	75
5.	Per capital income	
	- Rs 547 & below	30
	-Rs 1095-Rs 548	39
	-Rs 1895- Rs 1096	21
	-Rs3652-Rs1896	10
6.	Distance of nearest health centre	
	- <2km	45
	- 2-4km	04
	- >4km	51

Table 3: Frequency and percentage distribution of mothers related to the obstetrical history. N=100.

Sl.No.	Sample characteristics	f
1.	Para	
	Primipara	52
	Multipara	48
2.	Place of last delivery	
	Home	10
	District hospital	67
	Nursing home	23
3.	Mode of last delivery	
	Normal delivery	65
	Caesarean section	35
4	Last delivery conducted by	
	Doctor	38
	Nurse	52
	Dai	10

Table 4: Frequency and percentage distribution of the mothers related to the condition of the last baby at birth. N= 100

Sl.No	Sample characteristics	f
1.	Sex of the last baby	
	Male	41
	Female	59
2.	Condition of the last baby immediately after birth	
	Cried	98
	Not cried	02
	Congenital anomalies	-
3.	Complication arised of the last baby after birth	
	Jaundice	01
	Birth asphyxia	02
	Hyperthermia	01
	No complication	96

Table 5: Frequency and percentage distribution of the mothers according to the utilization pattern of post natal service. N= 100

Sl. No.	Sample characteristics	f	n	%
1.	Post natal visit			
	- 3 visit	34	100	34
	- < 3 visit	65		65
	- No visit	01		01
2.	Place of 1st post natal check up			
	- Hospital	67	99	68
	- Nursing home	23		23
	- Home	09		09
3.	1st post natal check up by			
	- Nurse	35	99	35
	- Doctor	62		63
	- Health worker	02		02
4	Subsequent post natal check up			
	- Received	57	99	58
	- Not received	42		42

majority (73) mothers were Muslim & only 27 were Hindu. Data shows that majority of the mothers (71) belonged to primary level of education and only one of the mothers had higher secondary level of education. On the other hand, majority of the husbands (64) had primary level of education, and only one of them was graduate [16-20]. [Table 2] Data presented in the table shows that all the mothers were house wife. Majority (55) of the participant's husbands were labour. Data also showed that majority (58), of the mothers were living in joint family and majority of the mothers (75) were having more than four members. Maximum (39) of the participant's per capita income was between Rs1095-Rs548 and only 10 had per capita income of Rs 3652-Rs 1896. Majority (51) of the mothers were having more than four km distance from nearest health centre.[Table 3] The data presented in the table shows that majority (52) of the mothers were primi para and 48 were multi para. Majority (67) of the last deliveries were conducted in hospital and 10 in home. Regarding mode of last delivery, majority (65) of the mothers delivered normally and 35 mothers delivered by caesarean section. Majority (52) of the deliveries were conducted by the nursing staff and 10 by Dai. [Table 4]

Table 4 reveals that majority (59) of the last baby were female. Majority (98) of the last baby cried immediately after birth and two had birth asphyxia and one had jaundice and hyperthermia respectively [21-25].

Section 2: Findings related to utilization pattern of postnatal services of the mothers

This section describes the utilization pattern of postnatal services of 100 participants in terms of, number of postnatal visits, place of first post natal visit, first post natal visit conducted by, utilization of subsequent post natal check-up, areas of health advice received and immunization of the last baby upto 6 weeks of age [Table 5]

Data presented in the table 5 shows that majority (66%) of the mothers received less than 3 post natal visit. From further investigation, the investigator found that one mother did not receive any post natal check-up. Out of 99 mothers majority (81%) received first postnatal check-up from institution and among them majority (63%) were checked by doctor. Data again reveals that 58 percent mothers received subsequent postnatal checkup. [**Figure 1**]

The data presented in the table shows that majority (99%) of the mothers received advice from health personnel in the areas of rest and sleep, personal hygiene, perineal hygiene, nutrition, danger signs of the baby breast feeding and baby immunization, whereas majority (81%) of the mothers did not receive health advices on family planning. [Table 6]

The data present in the table 6 shows, majority (95%) of the last baby received OPV -0 dose and B.C.G, 84% received OPV-1, 79% received Hb-1 and 83% received DPT-1.

Section 3- Findings related to the factors of the utilization and non -utilization of post natal Services

This section describes the factors for utilization and non-utilization of post natal services of 100 participants in terms of utilization and non-utilization of first post natal visit, subsequent postnatal services, immunization on schedule date. [Table 7]

Table 7 reveals that for utilization of first postnatal visit majority (89%) were for health worker advice and only 11 percent for health worker's visit at home. Regarding utilization of sub sequent post natal service majority (63%) were for immunization of the child and only 12 percent for self-illness. The table further depicts that out of 42 mothers, all the mothers did not receive subsequent post natal service as not being aware. [Table 8]
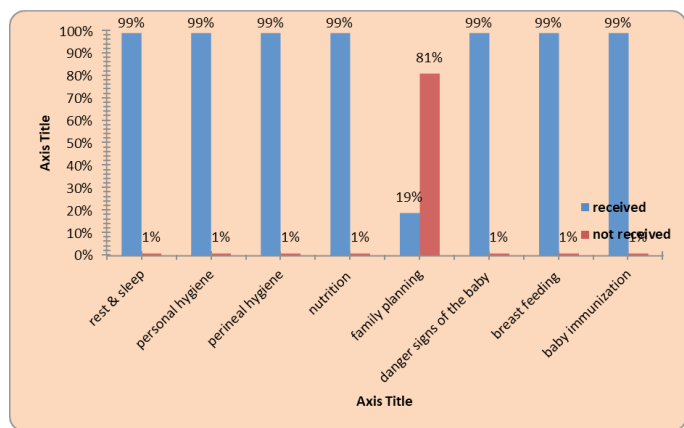

Figure 1: Percentage distribution of mothers according to the advices received from the health personnel.

Table 6: Frequency and percentage distribution of last baby related to immunization upto 6 weeks of age. N= 100

Sl. No.	Sample characteristics	f
1.	OPV- 0 dose Received	95
2.	OPV- 1 Received	84
3.	BCG Received	95
4.	Hb-1 Received	79
5.	DPT-1 Received	83

Table 7: Frequency and percentage distribution of mothers according to factors of utilization and non utilization of post natal services. N=100

Sl.No	Factors	n	Frequency	Percentege
1.	First post natal services :Health worker advised : For immunization of the child : Health worker's visit at home	99	89 - 10	89 11
2	Subsequent postnatal service: : Health worker advised :Illness of the baby : For immunization of the child – Self illness	57	- 14 36 07	- 25 63 12
3.	For not recieving Subsequent post natal service: : Not aware : Baby's illness, : Mother's illness	42	42 - -	100

The table shows that out of 95 babies (95%) received OPV-"0" and B.C.G for institutional delivery and only two percent for mother's awareness. Out of 84 babies majority (75%) received OPV-1 for health worker's advice and 25 percent for mother's awareness .For Hb-1vaccine out of 79 babies all of them received as their mothers were aware. Out of 83 babies all of them received DPT-1 because of health worker's advice. [Table 9]

The data presented in the table shows that out of 5, majority (80%) of the last babies did not receive O.P.V-0 and B.C.G for non-availability of the vaccine and20 percent for mother's illness. Out of 16 babies, 94percent did not receive O.P.V-1 for non-availability of vaccine and six percent for mother's illness. For D.P.T-1, out of 17 babies, 82percent did not receive for non-availability of the vaccine and six percent for mother's illness. Out of 21 babies, 95 percent did not receive for non-availability of vaccine and five percent for mother's illness.

Section 4- Findings related to the satisfaction level of mothers related to the post natal services.

This section describes the satisfaction level of 100 mother related to areas of physical facilities- (waiting space, drinking water, toilet facilities and waiting time), health worker's behavior (health worker's greeting, explanation for purpose of visit, opportunity to talk, maintaining privacy for history taking, maintaining privacy for examination), quality of postnatal care (time spend with the mother and baby, explanation while examining, conveying the findings of the study). [Figure 2]

Above bar diagram represents that majority of the mothers were satisfied related to physical facilities of the institution for postnatal service like waiting space (93%), drinking water (56%), toilet facilities (58%) except waiting time where only (17%) Mothers were satisfied. [Figure 3]

Above figure depicts that majority of the mothers were satisfied with health workers behavior related to greetings (97%), explanation regarding purpose of the visit (98%), opportunity to talk (94%). Figure also shows that majority of the mothers were partially satisfied with health worker's behavior related to maintaining privacy for history taking(65%) and for maintaining privacy for examination (65%). [Figure 4]

Figure 4 shows that majority of the mothers (63%) were partially satisfied with time spend with mother and baby by the health worker. Regarding explanation while examining (50%) and conveying the findings majority (55%) of the mothers were partially satisfied.

Table 8: Frequency and percentage distribution of last child according to factors of receiving immunization on scheduled date. N = 100

Immunization	n	Institutional delivery		Mothers awareness		Health worker's advice	
		f	%	f	%	f	%
O.P.V-0	95	90	95	02	02	03	03
B.C.G	95	90	-	02	02	03	-03
O.P.V-1	84	-	-	21	25	63	75
Hb-1	79	-	-	-	-	79	100
D.P.T-1	83	-	-	-	-	83	100

Table 9: Frequency and percentage distribution of mothers according to factors of not receiving immunization of last baby on scheduled date. N = 100

Immunization	n	Not aware		Non availability of vaccine		Baby's illness		Mothers illness	
		f	%	f	%	f	%	f	%
O.P.V -0	05	-	-	04	80	-	-	01	20
B.C.G	05	-	-	04	80	-	-	01	20
O.P.V-1	16			15	94			01	06
DPT - 1	17	-	-	14	82	02	12	01	06
Hb -1	21	-	-	20	95	-	-	01	05
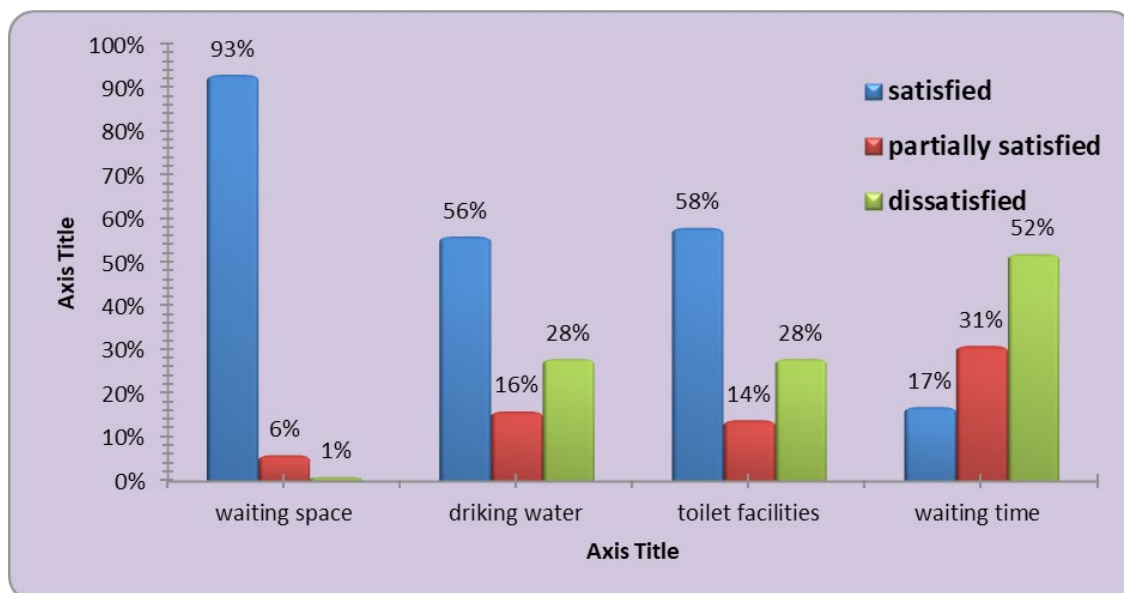
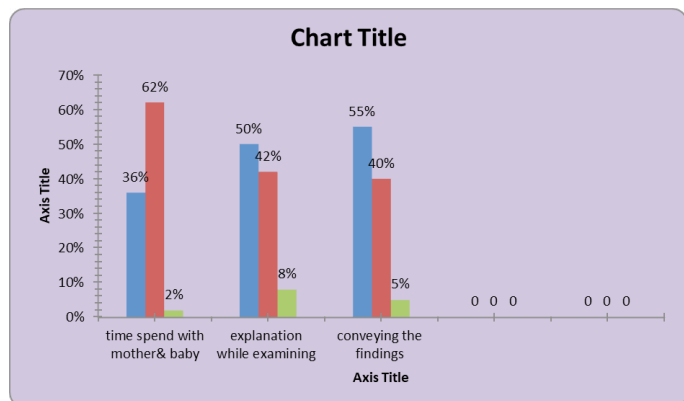**Figure2:** Satisfaction of mothers related to physical facilities of post natal services.
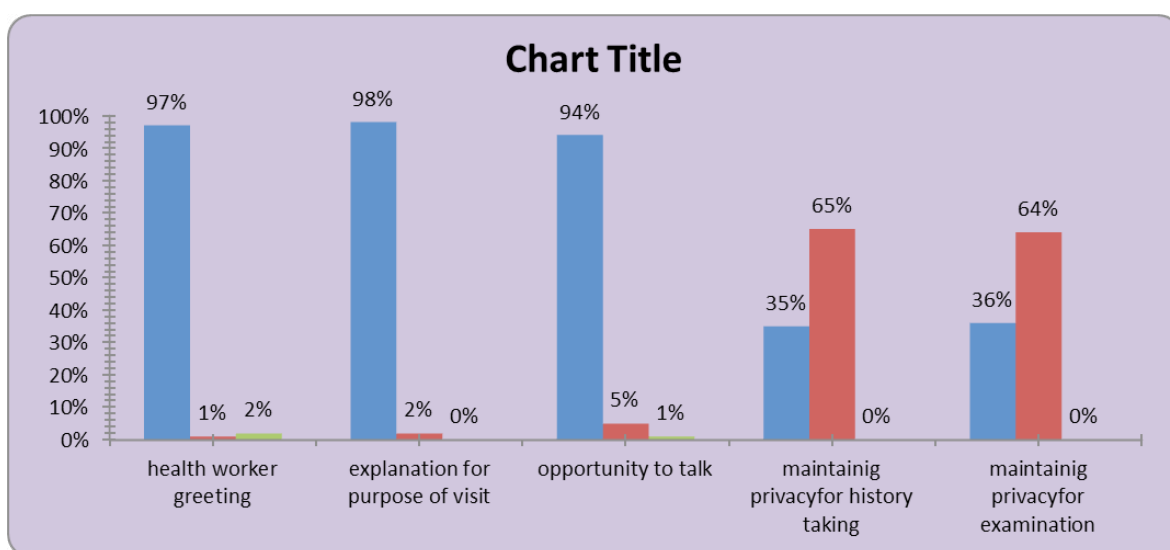
Figure 3: Satisfaction of mothers related to behavior of health worker's behavior.

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Section 5- Findings related to the association of selected factors with utilization of postnatal services.

[Table 10]

Chi square $(x^2)^*$ df(1)= 3.841, p>0.05

Figure 4: Satisfaction of mothers related to the quality of post natal care.

Table 10: Chi-square value showing the association between numbers of postnatal visit with selected factors. N=100

SI.No.	Selected variables	Utilization pat		Chi-square value
		3 visit	<3 visit	
	Mother's education - Primary & below - Above primary	32 02	44 22	5.8*
2	Husband's education - Primary & below - Above primary	31 03	50 16	2.7
3	Per capita income - < 1095 - > 1096	25 19	27 29	0.6
4	No. of living children - 1 - >1	25 19	27 29	0.6
5	Type of family - Nuclear - Joint	17 17	09 57	1.7
6	Distance of the nearest health centre from home - < 2km - 2-4km	15 19	27 49	0.8

Table 11: Chi-square value showing the association between numbers of postnatal visit with selected factors. N = 100

SI.No.	Selected variables	Utilization pat		Chi-square value
		3 visit	<3 visit	
1	Place of delivery - Institutional - Home	28 06	62 04	3.34
2	Mode of delivery - Normal - Caesarean	09 23	54 12	
3	Delivery conducted - Health personnel - Dai	28 06	62 04	3.34
4	Sex of the last child - Male - Female	18 16	23 43	30.3*
5	Condition of last baby at birth - Cried - Not cried	33 01	65 01	0.07
6	Complications of the last baby - Yes - No	03 31	01 65	1.5

Table 10 reveals that there is significant association of utilization pattern of post natal services with mother's education at 0.05 level of significance and also there was no significant association of utilization pattern of post natal services with husband's education level, per capita income, number of living children, type of family and distance of home from nearest health center. [Table 11]

Chi square $(x^2)^*$ df(1)= 3.841, p>0.05

Table 13 reveals that there is significant association of utilization pattern of post natal services with mode of delivery and sex of the last child at 0.05 level of significance and also there was no significant association of utilization pattern of post natal services with place of delivery, delivery conducted by, condition of the last baby at birth, complications of the last baby. [Table 12]

Chi square $(x^2)^*$ df(1)= 3.841, p>0.05 Table , reveals that there was significant association between receiving immunization on schedule

Table 12: Chi-square value showing the association between receiving immunization on schedule date with selected factors. N=100

SI.No.	Selected variables	Immunization on schedule date		Chi-square value
		Received	Not received	
1	Mother's education – Primary & below – Above primary	62 18	18 02	2.4
2	Husband's education – Primary & below – Above primary	67 13	14 06	5.1*
3	Per capita income – ≤1095 – > 1096	51 28	18 03	4.5*
4	No. of living children – 1 – >1	40 40	12 08	0.6
5.	Type of family – Nuclear – Joint	24 56	02 18	0.02
6.	Distance from nearest health centre - ≤ 4km- - > 4km-	38 42	11 09	0.36

Table 13: Chi-square value showing the association between receiving immunization on schedule date with selected factors. N=100

SI.No.	Selected variables	Immunization on schedule date		Chi-square value
		Received	Not received	
1	Place of delivery – Institutional – Home	73 07	17 03	0.17
2	Mode of delivery – Normal delivery – Caesarean	48 32	17 03	2.99
3	Delivery conducted by – Health personnel – > 1096	73 07	17 03	0.17
4	Sex of the last child – Male – Female	33 37	08 12	0.6
5.	Condition of the last baby at birth – Cried – Not cried	79 01	19 01	0.031
6.	Complications of the last baby - Yes - No	02 78	02 18	0.047

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date with husband's education and per capita income at 0.05 level of significance. The table also reveals that there was no significant relationship between receiving immunization on schedule date with number of living children, type of family and distance of nearest health center from home. [Table 13]

Table 13 reveals that there was no significant association between receiving immunization on schedule date with place of delivery, mode of delivery, delivery conducted by, sex of the last child, condition of the last baby at birth, complications of the last baby [26-30].

Conclusion

The study showed that (10%) deliveries were conducted at home. The study revealed that majority (99%) of the mothers had no knowledge regarding postnatal services & only 1% of the mothers had knowledge about postnatal services. The study also revealed that (99%) of the mothers received post natal services and (1%) did not receive any post natal service. About (81%) of the mothers did not receive any advice on family planning.

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